

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

What We Claim Is:

1. (original) A brake apparatus with improved heat transfer properties, comprising:

an annular disc; and,

at least one slot in said disc arranged at an angle greater than zero degrees and less than ninety degrees with respect to a radius of said disc passing through said slot.

2. (original) The brake apparatus as recited in Claim 1 wherein said annular disc further comprises a longitudinal axis and first and second face surfaces disposed substantially orthogonal to said longitudinal axis; and,
wherein said at least one slot further comprises a slot surface at least partially bounded by said first and second face surfaces.

3. (original) The brake apparatus as recited in Claim 2 wherein said at least one slot further comprises a protrusion disposed on said slot surface.

4. (original) The brake apparatus as recited in Claim 3 wherein said at least one slot has a length and a midpoint of said length and said protrusion is disposed proximate said midpoint.

5. (original) The brake apparatus as recited in Claim 2 wherein said annular disc further comprises an outer perimeter; and,
wherein said at least one slot is in communication with said outer perimeter.

6. (original) The brake apparatus as recited in Claim 5 wherein said at least one slot further comprises a protrusion disposed on said slot surface.

7. (original) The brake apparatus as recited in Claim 6 wherein said at least one protrusion is disposed proximate said outer perimeter.

8. (original) The brake apparatus as recited in Claim 2 wherein said disc further comprises an inner perimeter; and,
wherein said at least one slot is in communication with said inner perimeter.

9. (original) The brake apparatus as recited in Claim 8 wherein said at least one slot further comprises a protrusion disposed on said slot surface.

10. (original) The brake apparatus as recited in Claim 9 wherein said protrusion is disposed proximate said inner perimeter.

11. (original) The brake apparatus as recited in Claim 2 wherein said slot surface is substantially rough in texture.

12. (withdrawn) The brake apparatus as recited in Claim 2 wherein said at least one slot has a length in a straight shape with respect to a plane orthogonal to said longitudinal axis.

13. (original) The brake apparatus as recited in Claim 2 wherein said at least one slot has a length in an arcuate shape with respect to a plane orthogonal to said longitudinal axis.

14. (withdrawn) The brake apparatus as recited in Claim 2 wherein said at least one slot has a length in a shape, with respect to a plane orthogonal to said longitudinal axis,

comprising a combination of straight and arcuate segments.

15. (original) The brake apparatus as recited in Claim 2 wherein said annular disc has a thickness measured between said first and second face surfaces; and, wherein said at least one slot further comprises a first plurality of slots disposed so that each slot in said first plurality of slots is separated from an adjacent slot in said first plurality of slots by a distance, measured along said first surface, less than twice said thickness.

16. (original) The brake apparatus as recited in Claim 2 wherein said annular disc has a thickness measured with respect to said first and second face surfaces; and, wherein said at least one slot further comprises a width, measured with respect to said first surface, less than said thickness.

17. (original) The brake apparatus as recited in Claim 2 wherein said annular disc further comprises an outer perimeter and an inner perimeter; and, wherein said at least one slot further comprises a first slot in communication with said outer perimeter and a second slot in communication with said inner perimeter.

18. (original) The brake apparatus as recited in Claim 17 wherein said annular disc further comprises an annulus disposed midway between said inner and outer perimeters; and, wherein said first and second slots intersect said annulus.

19. (original) The brake apparatus as recited in Claim 1 wherein said at least one slot further comprises a second plurality of slots disposed in a specified pattern.

20. (original) The brake apparatus as recited in Claim 19 wherein said specified pattern is a homogeneous pattern.

21. (original) The brake apparatus as recited in Claim 1 wherein said annular disc is selected from the group including solid annular discs and vaned annular discs.

22. (withdrawn) The brake apparatus as recited in Claim 1 wherein said annular disc further comprises an inner perimeter; and,
wherein said slot includes a closed end disposed proximate said inner perimeter, configured in a triangular shape, and operatively arranged as a mounting hole for said annular disc.

23. (original) A method for making a brake apparatus with improved heat transfer properties, comprising:

creating an annular disc; and,

forming in said disc at least one slot arranged at an angle greater than zero degrees and less than ninety degrees with respect to a radius of said disc passing through said slot.

24. (original) The method recited in Claim 23 wherein said annular disc further comprises a longitudinal axis;
wherein said creation further comprises forming said disc with first and second face surfaces substantially orthogonal to said longitudinal axis; and,
wherein said formation further comprises forming said at least one slot with a slot surface at least partially bounded by said first and second face surfaces.

25. (original) The method recited in Claim 24 wherein said formation further comprises forming a protrusion disposed on said slot surface.

26. (original) The method recited in Claim 25 wherein said formation further comprises forming said at least one slot with a length and a midpoint of said length and

disposing said protrusion proximate said midpoint.

27. (original) The method recited in Claim 24 wherein said annular disc further comprises an outer perimeter; and,

wherein said formation further comprises connecting said at least one slot with said outer perimeter.

28. (original) The method recited in Claim 27 wherein said formation further comprises forming a protrusion disposed on said slot surface.

29. (original) The method recited in Claim 28 wherein said formation further comprises disposing said protrusion proximate said outer perimeter.

30. (original) The method recited in Claim 24 wherein said annular disc further comprises an inner perimeter; and,

wherein said formation further comprises connecting said at least one slot with said inner perimeter.

31. (original) The method recited in Claim 30 wherein said formation further comprises forming a protrusion disposed on said slot surface.

32. (original) The method recited in Claim 31 wherein said formation further comprises disposing said protrusion proximate said inner perimeter.

33. (original) The method recited in Claim 24 wherein said formation further comprises forming said slot surface with a substantially rough texture.

34. (withdrawn) The method recited in Claim 24 wherein said formation further

comprises forming said at least one slot with a length having a straight shape with respect to a plane orthogonal to said longitudinal axis.

35. (original) The method recited in Claim 24 wherein said formation further comprises forming said at least one slot with a length having an arcuate shape with respect to a plane orthogonal to said longitudinal axis.

36. (withdrawn) The method recited in Claim 24 wherein said formation further comprises forming said at least one slot having a length with a shape, with respect to a plane orthogonal to said longitudinal axis, comprising a combination of straight and arcuate elements.

37. (original) The method recited in Claim 24 wherein said annular disc further comprises a thickness measured between said first and second face surfaces; and, wherein said formation further comprises forming a first plurality of slots disposed so that each slot in said first plurality of slots is separated from an adjacent slot in said first plurality of slots by a distance, measured with respect to said first surface, less than twice said thickness.

38. (original) The method recited in Claim 24 wherein said annular disc further comprises a thickness measured between said first and second face surfaces; and, wherein said formation further comprises forming said at least one slot with a width, measured with respect to said first surface, less than said thickness.

39. (original) The method recited in Claim 23 wherein said annular disc further comprises an outer perimeter and an inner perimeter; and, wherein said formation further comprises forming a first slot extending to said outer perimeter and a second slot extending to said inner perimeter.

40. (original) The method recited in Claim 39 wherein said annular disc further

comprises an annulus disposed midway between said inner and outer perimeters; and,
wherein said formation further comprises disposing said first and second slots to each intersect
said annulus.

41. (original) The method recited in Claim 23 wherein said formation further
comprises disposing a second plurality of slots in a specified pattern.

42. (original) The method recited in Claim 41 wherein said disposal further
comprises disposing said second plurality of slots in a homogeneous pattern.

43. (original) The method recited in Claim 23 wherein said creation further
comprises creating said annular disc selected from the group including solid annular discs and
vaned annular discs.

44. (withdrawn) The method recited in Claim 23 wherein said annular disc further
comprises an inner perimeter; and,
wherein said formation further comprises forming said at least one slot with a closed end
disposed proximate said inner perimeter, configuring in a triangular shape, and operatively
arranging as a mounting hole for said annular disc.